

REMARKS

1. Reconsideration and further prosecution of the above-identified application are respectfully requested in view of the amendments and discussion that follows. Claims 1-14 are pending in this application. Claims 1-5 and 9-14 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,568,574 to Tanguay et al. After a careful review of the claims, it has been concluded that the rejections are in error and the rejections are, therefore, traversed.

2. Claims 1-14 have been rejected as being anticipated by Tanguay et al. In particular, the Examiner asserts that

Tanguay discloses a modulator-based photonic chip-to-chip interconnections for dense three dimensional multi-chip module integration with all the limitations of the abovementioned claims. Regarding claims 1 and 9, Tanguay discloses an apparatus for transmitting an optical communications signal (fig. 9 and 10), such apparatus comprising: an optically transparent substrate (32); an optical array (34), having a plurality of ports, disposed on a surface of the optically transparent substrate, such a plurality of transmission paths of the optical array pass directly through the substrate; and a plurality of optical gratings (254) disposed on a surface of the substrate, such that the transmission paths of the optical array pass substantially through the plurality of optical gratings.

It is noted first in this regard that the claims (as amended) are limited to "disposing a plurality of optical gratings on a surface of an optically transparent substrate; attaching an optical array having a plurality of optical ports to the optically transparent substrate, so that the optically transparent substrate mechanically

supports the optical array and so that an axis of transmission of the optical array passes directly through the substrate". FIG. 4 of the specification, in fact, clearly shows an optical array 144 mounted on a first surface of the substrate 152 and diffraction gratings 180 disposed on a second, opposing surface of the substrate 152.

In contrast, the referenced sections of Tanguay, Jr. et al. show reflective optical modulators 34a, 34b mounted to a reflective modulator array substrate 32 and etched outcoupling gratings 16a, 16b etched into a optical power bus 10. Further, the array substrate 32 and optical power bus 10 are shown in FIGs. 9 and 10 as having a spaced-apart relationship. Since the Tanguay, Jr. et al. modulators 34a, 34b and gratings 16a, 16b are associated with different substrates, Tanguay, Jr. et al. clearly does not meet the explicit limitations of the claimed invention. Since Tanguay, Jr. et al. clearly does not meet the express limitations of the claimed invention, the rejection is believed to be improper and should be withdrawn.

It is noted next that what the Examiner refers to as "an optical array (34)" is explicitly referred to in Tanguay, Jr. et al. as a "reflective modulator element (34a, 34b, respectively)" (Tanguay, Jr. et al., col. 9, lines 26-27). However, the claim term "optical port" would be clearly understood by those of skill in the art to be a term associated with photodiodes or LEDs, not reflectors.

In general, there is no series of method steps or structure found within Tanguay, Jr. et al. that corresponds to the claimed invention. Since there is no corresponding structure, the rejection is believed to be improper and should be withdrawn.

It is noted next that the Examiner asserts that "the Applicant agrees with the Examiner's §102(b) rejection of claims 1-5 and 9-14 as being anticipated by Tanguay U.S. Patent No. 5,568,574" (Office Action of 7/21/03, page 2). However, nothing could be further from the truth. In addition, the Examiner's rejection in the Office Action of 7/21/03 on pages 2-3 appears to be based upon the invention as originally claimed and not upon the claims as amended by the Response of 7/7/03. Since the Examiner has not considered or responded to the amendments of 7/7/03, the Office Action of 7/21/03 is believed to be incomplete. Since the Office Action is incomplete, the Final Rejection is believed to be improper and should be withdrawn.

3. Allowance of claims 1-14, as now presented, is believed to be in order and such action is earnestly solicited. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to telephone applicant's undersigned attorney.

Respectfully submitted,
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